

DETAILED ACTION

The previous Office Action, dated 09/29/08, is withdrawn since it was directed toward an incorrect version of the claims. The following action is set forth below.

Election/Restrictions

1. Applicant's election of group I (claims 1-4 and 9-21) in the reply filed on 7/7/2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 5-8 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group II, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 7/7/2008.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 and 15-20 are rejected under 35 U.S.C. 102(b) as being anticipated by JP'610 (JP 5-186610 see attached translation).

As to claim 1, JP'610 teaches a filler sheet for a solar cell module, which is formed as a filler sheet laminated on front face and rear face sides of a solar cell element and is made of a resin film produced by a resin composition comprising:

- A copolymer of an α -olefin and an ethylenic unsaturated silane compound ([0011], [0018] and [0032])
- and one or more selected from a group consisting of a light resisting agent an ultraviolet absorbent and a thermal stabilizer ([0033]).

Regarding claim 2, JP'610 teaches that the α -olefin is one or more selected from a group consisting of ethylene, propylene, 1-butene, isobutylene, 1-pentene, 2-methyl-1-butene, 3-methyl-1-butene, 1-hexene, 1-heptene, 1-octene, 1-nonene, and 1-decene ([0032]).

Regarding claim 3, JP'610 teaches that the ethylenic unsaturated silane compound is one or more selected from the group consisting of vinyltrimethoxysilane ([0018]).

Regarding claim 4, JP'610 teaches that the copolymer further comprises one or more selected from vinyl acetate, acrylic acid, methacrylic acid, methyl acrylate, methyl methacrylate, ethyl acrylate and vinyl alcohol ([0021]).

Regarding claim 15, JP'610 teaches a front face protecting sheet, a filler sheet, a solar cell element, a filler sheet and a rear surface protecting sheet in sequence ([0035] and [0036]).

Regarding claims 16 and 18, JP'610 teaches that the front and rear face protecting sheets are made of a glass plate or a fluorine contained resin sheet ([0036]).

Regarding claim 17, JP'610 teaches that the solar cell element is made of a crystal silicon or amorphous silicon solar cell element ([0036]).

Art Unit: 1795

Regarding claims 19-20, JP'610 teaches the structure required a front face protecting sheet, a filler sheet, a solar cell element, a filler sheet and a rear surface protecting sheet in sequence ([0036]). The sequence in which the product is formed is a product by process limitation and does impart further structural limitations on the product and is therefore not given patentable weight.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'610 as applied to claim 1 above and further in view of (JP 2001-320073 see attached translation).

Regarding claim 9, JP'610 teaches the use of stabilizers/additives in the copolymer ([0033]) but is silent to the additive being a light resisting agent made of a hindered amine type stabilizer.

Art Unit: 1795

JP'073 teaches an olefin based filler sheet for solar cells which includes a hindered amine system ([0069]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the hindered amine system of JP'073 in JP'610 because the additives increase weatherability of the solar module, as taught by JP'073 ([0069]) especially in light of the fact that it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice (MPEP 2144.07).

Regarding claim 10, JP'610 teaches the use of UV absorbers in the copolymer ([0033]) but is silent to the additive being a made of a benzophenone type or acrylonitrile derivative type.

JP'073 teaches an olefin based filler sheet for solar cells which includes a hindered amine system ([0069]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the benzophenone system of JP'073 in JP'610 because the additives increase weatherability of the solar module, as taught by JP'073 ([0069]) especially in light of the fact that it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice (MPEP 2144.07).

Regarding claim 11, JP'610 teaches the use of stabilizers/additives in the copolymer ([0033]) but is silent to the additive being a thermal stabilizer made of a phosphorous type or phenol type.

JP'073 teaches an olefin based filler sheet for solar cells which includes a phosphorous type or phenol type ([0069]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the phosphorous type or phenol type thermal stabilizer of JP'073 in JP'610 because the additives increase weatherability of the solar module, as taught by JP'073 ([0069]) especially in light of the fact that it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice (MPEP 2144.07).

Regarding claims 12-14, JP'610 teaches the use of stabilizers/additives in the copolymer ([0033]) but is silent to the light resisting agent being 0.01-5% by weight of the copolymer (claim 12), the UV absorbent being 0.05-5% by weight of the copolymer (claim 13) and the thermal stabilizer being 0.05-5% by weight of the copolymer (claim 14).

JP'073 teaches an olefin based filler sheet for solar cells which includes light resisting, UV absorbing and thermal stabilizing additives added to the filler sheet at 0.1 to 10% by weight depending on the shape and density of the product ([0069]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the light resisting agent at 0.01-5% by weight of the copolymer (claim 12), the UV absorbent at 0.05-5% by weight of the copolymer (claim 13) and the thermal stabilizer at 0.05-5% by weight of the copolymer (claim 14) in order to optimize the weatherability, heat resistance, lightfastness, water resistance, wind endurance, hailstorm proof nature of the solar cell module (JP'073: [0001]) as it has been held to be

Art Unit: 1795

within the general skill of a worker in the art to discover an optimum value of a result effective variable as part of routine skill in the art (MPEP 2144.05).

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP'610 as applied to claim 15 above and further in view of JP'309 (JP 2002-009309 see abstract in IDS).

Regarding claim 21, modified JP'610 is silent to the gel fraction of the filler sheet being 10% or less.

JP'309 teaches a solar module has an improved adhesion sheet comprised of a olefin and ethylene unsaturated silane compound wherein the gel fraction is 30% or less.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the filler sheet of JP'309 in modified JP'610 because the filler sheet of JP'309 provides improved adhesion strength. Moreover, in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists and it has been held to be within the general skill of a worker in the art to discover an optimum value of a result effective variable as part of routine skill in the art (MPEP 2144.05).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **MIRIAM BERDICHEVSKY** whose telephone number is (571)270-5256. The examiner can normally be reached on M-Th, 10am-8pm.

Art Unit: 1795

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on (571) 272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. B./
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